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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,520	05/11/2007	Robert Poirrier	80119/40360 (150026.00000)	1235
29471 7590 02/25/2011 MCCRACKEN & FRANK LLP 311 S. WACKER DRIVE SUITE 2500 CHICAGO, IL 60606			EXAMINER LIPITZ, JEFFREY BRIAN	
			ART UNIT 3769	PAPER NUMBER
			MAIL DATE 02/25/2011	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,520	<b>Applicant(s)</b> POIRRIER ET AL.	
	<b>Examiner</b> JEFFREY B. LIPITZ	<b>Art Unit</b> 3769	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,6-10 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-10 and 13-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/7/2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 17, 2011 has been entered.

### ***Response to Arguments***

Applicant's arguments with respect to the prior art rejections have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6-7, 9-10, 13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerdt (6235046) in view of Potin (6715150).

Regarding claims 1, 2, 6 and 7, Gerdt teaches a device for implementing a phototherapy method on a set of eyes (Column 2, Lines 30-36) comprising: glasses or spectacles (170) with a plastic frame (180) and lenses (178), and at least one light source (172 or 176 or 202) mounted on or embedded in the lenses or frame (Column 8,

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Lines 61-67; Column 9, Lines 1-9; Figure 16). Gerdt teaches that specific wavelengths are applied to the retina, but minimal light is applied to the fovea (Column 5, Lines 56-59). Gerdt teaches that the light sources are positioned in a circular configuration around the center of the eye or at the periphery of a field of vision of the individual (Figures 4, 6 and 13). Gerdt does NOT teach an off-axis diffractive optical element.

Attention is directed to Potin who teaches visors for a helmet (Abstract). Potin teaches that the visor includes an image projection source located on the forehead, which is in the periphery of the user (Col. 1, Lines 16-28), and an off-axis diffractive optical element or holographic diffraction mask affixed to a face of the visor (Col. 4, Lines 34-39; Col. 10, Lines 47-67). Potin's rationale for providing the diffractive element is in part to enable the user to look in any direction and see the projected image or a real image clearly. Potin is attempting to solve the problem introduced by the eyes of the user being offset relative to the center of the spherical internal faces of the visor, so that when light is projected from above the forehead or at the periphery of vision (C1, C2; Figure 5) or from a peripheral external source, it will be corrected relative to the users eyes by the diffractive element.

It would have been advantageous to modify the invention of Gerdt with the diffractive mask of Potin because doing so would have enabled the light source to be more accurately focused at targets within the eye. In addition, Potin's mask would reduce distortion caused by the large angles associated with the output of the emitters. Moreover, it would have been obvious to modify Gerdt in view of Potin because both inventors are projecting images and or patterns into the eye.

Regarding claims 3 and 15, Gerdt teaches angling the light into the eye so that it terminates on the retina and avoids direct contact with the fovea (Column 5, Lines 45-53). Gerdt also teaches using multiple apertures to direct light into the eye (Figures 4, 6 and 13). An image or rays of light are normally projected onto the retina by converging at a point behind the pupil (Figure 1 ). The greater the angle of entry of the light rays into the eye, relative to the direct line of vision (perpendicular to the center of the pupil), the closer the convergence of the light rays, relative to the pupil. In order for the light to form an image on the retina the light rays must converge before the retina, as illustrated in Figure 1.

Regarding claim 9, Gerdt teaches that the light sources can be LED's (Column 6, Lines 28-67) and that each eye has its own deflection means (lenses and light ring) arranged to cooperate with the light sources of each eye (Column 9, Lines 1-8; Figure 16). Each of the lenses (178) is any of the embodiments of light rings discussed with respect to Figures 4, 6, 13, or 14.

Regarding claims 10 and 13, Gerdt teaches using different numerical apertures for the core and cladding. These properties of the core and cladding alter the angle of exit of the light beam into the light ring. The fibers are embedded in the frame of the glasses with the light source (Column 8, Lines 66-67; Column 9, Lines 1-8). Examiner interprets the frame of the glasses to be at the periphery of the field of vision. Claim 13 recites limitations that are necessitated by the limitations set forth in claim 6 ("emitting light rays are directed into the eyes by deflection means") and claim 10 ("a condenser is

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arranged so as to direct light rays emitted by each of the light sources onto deflection means").

Regarding claim 14, Gerdt and Potin are silent with respect to the F number of the diffractive lenses. However, Applicant provides no rationale for using an F number of around 0.7. Therefore, the approximate F number of the diffractive lens does not appear to be critical to the practice of the invention. In addition, the optimal F number will depend on the position of the target spot to be illuminated relative to the light source. Applicant discloses that the light rays should be directed to a point slightly behind the pupil of the eye (Pages 4 and 10). Gerdt teaches angling the light onto the retina, which is behind the pupil of the eye. Therefore, Gerdt must have chosen an F number of the diffractive lens that would enable light to be directed in a similar manner.

Regarding claims 16 and 17, Gerdt teaches that some of the lit ends (176; Figure 16) or the places when the light leaves the apertures are positioned above the fovea since they are positioned on the top of the frame (180). This means that the "specific zone" is inherently below the fovea, when the light is emitted from above the fovea. Thus, at the very least, Gerdt's device is capable of providing a specific zone below the fovea, and it would inherently do so in instances in which those sources are primarily used. Furthermore, the method claim could be rejected under 103 as it would be obvious to provide light sources above the fovea or focus the light below the fovea in instances in which the patient is preferentially viewing objects in front of and above their line of sight. Gerdt teaches providing his device so that a patient can undergo the therapy at the same time as performing other activities (Background of the Invention).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gerdt and Potin as applied to claim 6 above, and further in view of Goldman (US 5923398).

Regarding claim 8, Gerdt and Smith do NOT teach using a spectacle attachment to provide the light sources or the deflection means as claimed. However, attention is directed to Goldman who also teaches eyewear for providing retinal stimulation (Column 2, Lines 1-14). Goldman teaches using clip-on elements or spectacle attachments to be attached to the wearer's glasses (Column 2, Lines 34-39; Column 4, Lines 31-36). The remaining limitations of this claim are substantially similar to those of claim 7, rejected supra. It would have been obvious to use spectacle attachments with eyeglasses, because some patients that require the phototherapy treatment offered by Gerdt may need to use corrective lens to read or watch television. It is an object of Gerdt to provide the user with a device that will allow a user to read or watch television while undergoing treatment (Column 5, Lines 50-55).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY B. LIPITZ whose telephone number is (571)270-5612. The examiner can normally be reached on Monday to Thursday, 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry M. Johnson III can be reached on (571)272-4768. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEFFREY B LIPITZ/  
Examiner, Art Unit 3769

/Henry M. Johnson, III/  
Supervisory Patent Examiner, Art  
Unit 3769